Monitoring biological control agents is an essential component of a successful biocontrol program that can be used to accurately document impact and safety of this weed management practice. This monitoring form has been endorsed by the Nez Perce Biocontrol Center, University of Idaho, Forest Health Protection, Bureau of Land Management, and Idaho State Department of Agriculture. The monitoring information from this form will be used to document vegetation cover, target weed density, and biological control agent abundance and the changes that occur over time.

Idaho's Statewide Biological Control Monitoring Form – Timed (for CYAC, MEJA, & URCA galls)

General Information:

Observer(s):		Date:	Landowner:
Permanent site? Y N	Site name:		Weed:
Biocontrol agent:		Insect Stage: Adult Larvae Pupae Egg	
Lat/Long: N ° ‘	W ° ‘	UTM Datum:	UTM E:
		UTM Year :	UTM N:

Weed Infestation:

Size in acres:	Picture taken?	Yes No	If Y, picture direction:

Vegetation cover (all in %, rows add to 100%):

Frame	Target weed%	Other weed%	Forb/shrub%	Grass%	Bare ground%	Litter%	Moss%	Total%
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								

Target weed size/density:

Frame	Number of stems	Height of tallest stem (cm)
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

Biological control agent:

Count location	# insects (or galls) per 3 min. count
1	
2	
3	
4	
5	
6	

Notes:

A step-by-step approach for completing the monitoring form:

General Information:

- Observer(s) – Who are you?
- Date – Today's date.
- Landowner – Who is the landowner/land manager?
- Permanent? – Is this a permanent monitoring site?
- Site name – Which site are you monitoring? This could have a specific name if it is a permanent site.
- Weed – Which target weed are you are monitoring?
- Biocontrol agent – Which biocontrol agent you are monitoring?
- Insect Stage – What is the growth stage of the agent are you monitoring?
- Lat/Long OR UTM – What are the coordinates of the site you are monitoring? If UTM (preferred), what datum and year are your coordinate system?

Annual grass – note stems which are typically solitary or in a few stemmed tufts.

Vegetation Cover (all in %, rows add up to 100%) – All percentages are to be estimated to the nearest 5%. Put a "T" on the form for trace amounts less than 5%.

- Frame – Which frame number are you working on (1= 2m, 2= 4m, …,10 = 20m)?
- Target weed % – What is % cover of the target weed to the nearest 5%?
- Other weeds % – What is the % cover of any other weeds in the frame to the nearest 5%? Count undesirable annual grasses as weeds.
- Forb/Shrub % – What is the % cover of native forbs/shrubs in the frame to the nearest 5%?
- Grass % – What is the % cover of grass to the nearest 5%?
- Bare Ground/Litter % – What is the % cover of bare ground/litter to the nearest 5%?

Target Weed Size/Density

- Frame – Which frame number are you working on (1= 2m, 2= 4m, …,10 = 20m)?
- Number of stems – How many stems of the target weed are in the frame?
- Height of tallest stems (cm) – How tall is the tallest stem in the frame (in cm)?

Perennial grass – note the multiple stem base with multiple year's growth.

Biological Control Agent

- Count location – In an area within the same weed infestation as the transect, identify 6 sites at least 5 paces away from the transect.
- # of insects or galls per 3 min. count – How many insects can you count in a 3 minute period? Carefully approach the plants and be sure to count insects one time only. Please repeat 5 times (for a total of 6) moving at least 4 paces away from the first count location.